

Abstract

Title: Kinematic Analysis of Tennis Serve.

Objectives: To evaluate tennis serve realization in the selected performance category, to review speed of particular serve types and define the differences. To create detailed movement analysis of the slice serve from the right side of the court and set up a trajectory of the centre of gravity.

Methods: Case study using kinematic 2D and 3D analysis was made.

Results: We found out that the flat serve is the fastest type of serve. There are differences in the body centre of gravity trajectory by comparison with elite tennis players. We also found out that serving from the right side of the court is being hit higher, than from the left side. We assume there is a very close connection between serve speed and the point of impact.

Keywords: tennis, serve, kinematic analysis, 2D, 3D